How to setup the WA232E Serial WiFi adapter
(based on Windows 10, 32/64-bit)

This step-by-step guide explains how to get started using the Serial RS232 WiFi Adapter part WA232E. This product has many more advanced features and functions than described in this guide so you should consider this guide only as a quick-start guide to help you get started with the basic functions.
Configuring the parameters

The WA232E’s parameters can be configured several ways:

- Web browser over WiFi
- Configuration utility software (included) over WiFi
- Serial RS232 port

We will here describe each one of these methods.

The default network settings are:

Adhoc mode (Simple AP), DHCP enabled
SSID: Serial2WiFi_ab_cd (ab_cd is the last 4 numbers of the MAC address)
No Security
IP: 192.168.0.3
Socket port: 5000
Channel: 11
Log in ID: admin
Log in password: admin

The default COM port settings are:
Baud rate: 9600 bps
Data bit: 8
Parity: none
Stop bit: 1
Flow control: none
Configuring the parameters using a Web browser

Use your WiFi adapter’s connection manager or Windows WiFi manager to connect to the adapter. In this example we use Windows connection manager:
The WA232E has DHCP enabled by default so make sure your wireless network has “Obtain an IP address automatically” selected. Go to “Control Panel\All Control Panel Items\Network Connections”, right-click wireless network and click “Properties”. Select “Internet Protocol Version 4 (TCP/IPv4)” and click “Properties”.

![Internet Protocol Version 4 (TCP/IPv4) Properties](image)
Open Internet Explorer and enter the IP address http://192.168.0.3. You should now see the login screen.

The default username is: admin
The default password is: admin
Below are screenshots of the default configuration pages (firmware v_0.7.4.0103):

<table>
<thead>
<tr>
<th>Basic</th>
<th>Advanced</th>
<th>Security</th>
<th>WiFi</th>
<th>WiFi Wizard</th>
<th>RTC</th>
<th>Status</th>
</tr>
</thead>
</table>

**Serial Settings**

<table>
<thead>
<tr>
<th>Device Name:</th>
<th>DSM1</th>
</tr>
</thead>
</table>

*Device name can be up to 16 characters.*

<table>
<thead>
<tr>
<th>Data Baud Rate:</th>
<th>9600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Bits:</td>
<td>8</td>
</tr>
<tr>
<td>Data Parity:</td>
<td>None</td>
</tr>
<tr>
<td>Stop Bits:</td>
<td>1</td>
</tr>
<tr>
<td>Flow Control:</td>
<td>None</td>
</tr>
<tr>
<td>RS485:</td>
<td>Disable</td>
</tr>
</tbody>
</table>

**Serial to Network Settings**

<table>
<thead>
<tr>
<th>Operation Mode:</th>
<th>Socket</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection Type:</td>
<td>TCP</td>
</tr>
<tr>
<td>Transmit Timer (ms):</td>
<td>100</td>
</tr>
</tbody>
</table>

*Please enter an integer between 10-65535.*

<table>
<thead>
<tr>
<th>Server/Client Mode:</th>
<th>Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Listening Port:</td>
<td>5000</td>
</tr>
</tbody>
</table>

*Please enter an integer between 1024-65535.*

<table>
<thead>
<tr>
<th>TCP Server Connections:</th>
<th>1</th>
</tr>
</thead>
</table>

*This is effective only for TCP server under Socket or VCOM mode.*

<table>
<thead>
<tr>
<th>Client Destination Host Name/IP:</th>
<th>192.168.0.2</th>
</tr>
</thead>
</table>

*Please enter host name or IP address (e.g. google.com or 10.4.1.100).*

<table>
<thead>
<tr>
<th>Client Destination Port:</th>
<th>5000</th>
</tr>
</thead>
</table>

*Please enter an integer between 1024-65535.*

<table>
<thead>
<tr>
<th>Client Connection Mode:</th>
<th>Auto Connection</th>
</tr>
</thead>
</table>

**Static IP Settings**

<table>
<thead>
<tr>
<th>Static IP Address:</th>
<th>192.168.0.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static Default Gateway:</td>
<td>192.168.0.1</td>
</tr>
<tr>
<td>Static Subnet Mask:</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>Static DNS Server:</td>
<td>188.86.1.1</td>
</tr>
</tbody>
</table>
Serial WiFi Converter

Firmware Upgrade

Image path:

Please specify the image file path for firmware upgrade.

Upgrade

E-mail & Auto Warning Report Settings

SMTP Server Address/IP:

asix.com.tw

Please enter host name or IP address (e.g. google.com or 10.4.1.100).

Security:

SSL

SMTP Server Port:

465

From E-mail Address:

dsa@asix.com.tw

To E-mail Address 1:

toa1@asix.com.tw

To E-mail Address 2:

toa2@asix.com.tw

To E-mail Address 3:

toa3@asix.com.tw

Cold Start:

Disable

Authentication Failure:

Disable

Local IP Address Changed:

Disable

Password Changed:

Disable

Save  Apply  Cancel

MODBUS Settings

Transfer Mode:

Transparent TCP

Server Port:

502

Response Timeout:

3000

Available range: 10-65000ms.

Inter-Frame Delay:

10

Available range: 16-500ms.

Inter-Character Delay:

10

Available range: 10-500ms.

Save  Apply  Cancel
### System Settings

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Mode:</td>
<td>AP</td>
</tr>
<tr>
<td>AP Channel:</td>
<td>11</td>
</tr>
<tr>
<td>Service Area Name/SSID:</td>
<td>Serial2WiFi_03_fe</td>
</tr>
<tr>
<td>Security Mode:</td>
<td>Open</td>
</tr>
</tbody>
</table>

#### WEP Encryption Key Settings

<table>
<thead>
<tr>
<th>Key Length:</th>
<th>64 bits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Index Select:</td>
<td>Key Index 0</td>
</tr>
<tr>
<td>Key Index 0:</td>
<td>12345</td>
</tr>
<tr>
<td>Key Index 1:</td>
<td>67890</td>
</tr>
<tr>
<td>Key Index 2:</td>
<td>54321</td>
</tr>
<tr>
<td>Key Index 3:</td>
<td>89876</td>
</tr>
</tbody>
</table>

*Please enter 5 ASCII codes or 10-digit hex for 64-bit key length.*

#### AES/TKIP Encryption Key Settings

<table>
<thead>
<tr>
<th>AES/TKIP Passphrase:</th>
<th>12345678</th>
</tr>
</thead>
</table>

*Please enter a string between 8-63 digits in length.*
Welcome to the WiFi Setup Wizard

Use site survey tool to join a WiFi AP.

<table>
<thead>
<tr>
<th>ID</th>
<th>BSSID</th>
<th>SSID</th>
<th>TYPE</th>
<th>CH</th>
<th>SIGNAL</th>
<th>SECURITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>00:11:20:6e:f9:10</td>
<td>SETUP</td>
<td>Infra</td>
<td>11</td>
<td>-78</td>
<td>Open</td>
</tr>
<tr>
<td>1</td>
<td>00:0f:15:00:c0:06</td>
<td>CoronaExtra</td>
<td>Infra</td>
<td>3</td>
<td>-92</td>
<td>WPA2 TKIP</td>
</tr>
</tbody>
</table>

Status: Scanning...ok
Serial WiFi Converter

RTC Settings

RTC Time Setup:  
- Manual
- NTP Server

Daylight Saving Time:  
Note that the daylight saving time is supported only in NTP server mode.

Date & Time Settings

Date:  
Please enter the year between 2000–2099, the month between 1–12, and the date between 1–31.

Time:  
Please enter the hour between 0–23, the minute between 0–59, and the second between 0–59.

Note that the date and time are allowed to modify in manual mode.

SNTP Client Settings

Time Zone:  
GMT+8.0 Hong Kong, Singapore

NTP Server HostName/IP 1: time.stdtime.gov.tw
NTP Server HostName/IP 2: bick.stdtime.gov.tw
NTP Server HostName/IP 3: foeck.stdtime.gov.tw

Save  Apply  Cancel
Serial WiFi Converter

System Status

Device Name: DSM1
Device IP Address: 192.168.0.3
Firmware Version: 0.7.4.0103(Single)
WiFi MAC address(Hex): 0x000064003fe
Modem Status(Hex): 0x00
Protocol Type: TCP
Connection Status: Idle
Serial Port TX Count(Byte): 0
Serial Port RX Count(Byte): 0
Current Temperature(°C): 0.00
Current Relative Humidity(%) : 0.00
Current Date: 0/0/0 Sunday
Current Time: 0:0:7
Image File Name: ota_r2w_v0740103_20170427.bin
Cloud Connection Status: No cloud service

Refresh Start  Refresh Stop
Configuring the parameters using the software utility

Install the software utility by executing the file “R2W_RS232-to-WiFi_Toolkit” (either the 32-bit version or the 64-bit version).

After installation has finished, start the utility with administrator privileges. You do that by right-clicking the program icon and select “Properties”, then enable “Run this program as an administrator” and click “Apply” and “OK”:

![AXMR2W Configuration Utility Properties](image-url)
If your computer has more than one network connection you need to select the wireless network which is in the same subnet as the WA232E:

Select a Network Interface

Multiple network interfaces are detected!
Please select a proper network interface

Network Interface

192.168.0.4
192.168.1.131
192.168.0.4

Continue

Use the up/down arrows to scroll through the IPs if there are more than two IPs.
Once the software is open, click the Search button and the software should find the WA232E:

Select the WA232E from the device list and click “Device Setup” and the settings window will open:
## Device Setup

### Network Setting
- **Device Name:** DSM1
- **MAC Address:** 00:0E:6C:40:03:FE
- **DHCP:** Disable
- **Static IP:** 192.168.0.3
- **Server:**
  - **Data Listening Port:** 5000
- **Client:**
  - **Destination Port:** 5000
- **Destination Hostname/IP:** 192.168.0.2
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.0.1
- **DNS Server:** 168.95.1.1
- **Transmit Timer:** 100
- **Domain Name:** asix.com.tw

#### SMTP Configuration Parameters
- **From Address:** ds@asix.com.tw
- **To Address 1:** jo1@asix.com.tw
- **To Address 2:** jo2@asix.com.tw
- **To Address 3:** jo3@asix.com.tw
- **Security:** SSL
- **SMTP Security Port:** 465
- **Evt Ener/Disab:**
  - **IP Change:** Disable
  - **Password Change:** Disable
  - **Authentication Fail:** Disable
- **User Name:** user@asix.com.tw
- **Password:** password

#### MODBUS Setting
- **Transfer Mode:** Transparent TCP
- **Server Port:** 502
- **Response Timeout:**
  - **1s:** 10 ~ 65000 ms
- **Inter-Frame Delay:** 10
- **Inter-Character Delay:** 10

**Firmware File:** cta_2w.bin

[Submit] [Save] [Load]
<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud Rate</td>
<td>9600</td>
</tr>
<tr>
<td>Data Bits</td>
<td>8</td>
</tr>
<tr>
<td>Parity</td>
<td>None</td>
</tr>
<tr>
<td>Stop Bits</td>
<td>1</td>
</tr>
<tr>
<td>Flow Control</td>
<td>None</td>
</tr>
</tbody>
</table>
Device Setup

Network Setting | Serial Port Setting | WiFi Setting | DHCP Server Setting | NTP Setting

**System Settings**

- **Network Mode**: AP
- **AP Channel**: 11
- **Service Area Name/SSID**: Seria2WF_03_fe
- **Security Mode**: OPEN

**WEP Encryption Key Settings**

- **Key Length**: 64 bits
- **Key Index Select**: Key Index 0
- **Key Index 0**: 12345
- **Key Index 1**: 67890
- **Key Index 2**: 54321
- **Key Index 3**: 09876

*Please enter 10-digit hex for 64-bit key length or 26-digit hex for 128-bit key length*

**AES/TKIP Encryption Key Settings**

- **AES/TKIP Passphrase (3 ~ 63 digits)**: 12345678
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Pool Start Address</td>
<td>192.168.0.4</td>
</tr>
<tr>
<td>IP Pool End Address</td>
<td>192.168.0.10</td>
</tr>
<tr>
<td>Subnet Mask</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>Default Gateway</td>
<td>192.168.0.3</td>
</tr>
<tr>
<td>Leasoo Time</td>
<td>1440 minutes</td>
</tr>
<tr>
<td>Status</td>
<td>Enable</td>
</tr>
</tbody>
</table>
Configuring the parameters over the RS232 serial port

Connect the WA232E to your computer via the serial port. Create a connection to the WA232E by using a terminal software such as Putty or Tera Term. Below is an example for the settings:

![PuTTY Configuration](image)
When the connection is established, enter +++ and press the Enter key on your keyboard to access the WA232E. (The +++ will not show up in TeraTerm's/Putty's window). NOTICE THAT ON SOME KEYBOARDS YOU NEED TO ENTER THE +++ AND PRESS ENTER BY USING THE MAIN KEYBOARD, NOT THE SMALL NUMBER PAD.

You are now ready to enter commands. Please refer to the datasheet for a complete list of commands, or enter 'help' to get the help menu.
Example for changing the IP address:

First use the “setip” command to set the desired IP address then use the “saveconfig” and “reboot” commands to save and reboot the adapter. After this you will need to login to the adapter again using the +++ command. Once you are logged in you can check the new settings using the “ipconfig” command.

```
COM4 - PuTTY

humart> setip 192.168.0.5
Ck
humart> saveconfig
Ck
humart> reboot
System reboot!
```
Creating a virtual COM port with the software utility

A virtual COM port can be created by using the AXMR2W Configuration Utility or it can be created by using alternative VCOM software such as PortShare, Fabulatech or USC-VCOM as described later in this setup guide.

First we show how to create a virtual COM port with the included configuration utility.

Make sure the WA232E is connected to the WiFi network.

Go to the “Virtual Serial Port” menu and click the “Add” button:
Select a COM port number:

The COM port should now be listed in the Virtual Serial Ports List:
Check in Windows Device Manager to see if the COM port has been successfully created:
Click the “Setting” button and make sure the adapter’s IP address is entered in the “Remote Host IP” field, and click OK.
Click the “Connect” button and the software will open the COM port, ready to send and receive data.
Verifying communication with a loop-back test

To check if the WA232E can send and receive data successfully you can make a loop-back test using AccessPort (can be downloaded from www.usconverters.com).

First loop-back the TX pin (pin 2) to the RX pin (pin 3) in the WA232E’s DB9 connector by placing a jumper (for example a paperclip) between the TX and RX pins:
Open AccessPort and set the parameters as shown below:
Enter a text string in the lower (send) window.

Click the "ON" button to open the COM port.

Click "AutoSend". The text string should now be sent to the WA232E, out on the TX pin and back through the jumper on the RX pin and appear in the upper (receive) window:
Alternatively a similar test can be made with the built-in COM terminal. Enable “Auto Test” and the software will send out test strings on the TX line:
Creating a virtual COM/TCP port - example using PortShare

When creating a virtual COM port, an alternative to using the software utility for the WA232E is using a COM port redirector called PortShare. PortShare can be downloaded for free at www.usconverters.com. First make sure that the WA232E has joined the network.

Start PortShare and enter the settings of the WA232E as shown below:
Default settings can usually be used without problems. PortShare will in this example create COM 5:
COM port 5 is now available in Device Manager, under “Virtual Serial Ports” in Windows 10. In older Windows versions the COM port may be listed under “Ports (COM & LPT)”: 

![Device Manager Screenshot](image)

To verify that the created virtual COM port can communicate properly with the WA232E you can make a loopback test as described earlier in this guide in the section called “Verifying communication with a loopback test”.

Alternative compatible Virtual COM/TCP software is:


These alternative solutions are good products and offers a 30 day trial period.
Creating a virtual COM/TCP port - example using Fabulatech

Fabulatech’s “Serial Port Redirector” is compatible with the WA232E and an excellent alternative to creating a virtual COM port.
A 15-day trial software can be downloaded from www.fabulatech.com.

Here is a quick overview of what the Fabulatech COM port redirector software looks like:

Enter the COM port number and the IP address of the WA232E
The COM port is now available in Windows Device Manager:
Check the COM port with AccessPort:
The small green dot next to the COM port indicates that the port is open:

Check that you can send and receive data with a loop-back test:
The following shows Fabulatech's COM port redirector's available settings:
### Serial Port Properties

#### General

- **Use fixed baud rate**
  - Bits per second: 9600

- **Use fixed line control**
  - Data bits: 8 bits
  - Parity: No parity
  - Stop bits: 1 bit

- **Use fixed flow control**
  - Flow control: Hardware

#### OK | Cancel
Point-to-point setup

The WA232E can be configured to communicate in pairs between two serial ports, also called point-to-point communication.

Simple AP (TCP Server)  Infrastructure/station mode (TCP Client)

The Server adapter (configured as an Access Point by default) is using all default settings as shown below:

- **Serial Settings**
  - Device Name: DSM1
  - Data Baud Rate: 9600
  - Data Bits: 8
  - Data Parity: None
  - Stop Bits: 1
  - Flow Control: None
  - RS485: Disable

- **Serial to Network Settings**
  - Operation Mode: Socket
  - Connection Type: TCP
  - Transmit Timer (ms): 100 (Please enter an integer between 10-65535)
  - Server/Client Mode: Server
  - Server Listening Port: 5000 (Please enter an integer between 1024-65535)
  - TCP Server Connections: 1
    - This is effective only for TCP server under Socket or VCOM mode.
  - Client Destination Host Name/IP: 192.168.6.2
    - Please enter host name or IP address (e.g., google.com or 10.4.1.100)
  - Client Destination Port: 5000
    - Please enter an integer between 1024-65535

- **Static IP Settings**
  - Static IP Address: 192.168.6.3
  - Static Default Gateway: 192.168.6.1
  - Static Subnet Mask: 255.255.255.0
  - Static DNS Server: 168.95.1.1

- **DHCP Settings**
  - DHCP Client: Disable
  - DHCP Server: Enable
The other adapter must be configured as a Client in STA (Station) mode, with its host IP address set as the same as the Server’s IP address, which is 192.168.0.3 and port 5000:
Now save the settings and restart the adapter. The Client adapter should now connect with the Server adapter automatically.
Connecting with Android

Connecting and communicating with the WA232E using an Android tablet is easy. Simply search for the WA232E using the tablet’s built-in WiFi manager and connect to the WA232E:

![Android WiFi Connection](image.png)

You can now login to the adapter’s admin page using any web-browser.

A free terminal emulator APP for Android is offered from the Google Play store:


Most of the free serial terminals are compatible with the WA232E, simply search the Google Play Store for “Serial Terminal”, see what is available and experiment with the various terminals until you find one you like.
Connecting with iOS

Connecting and communicating with the WA232E using an iPad table is easy. Simply search for the WA232E using the tablet's built-in WiFi manager and connect to the WA232E:

<table>
<thead>
<tr>
<th>Settings</th>
<th>Wi-Fi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airplane Mode</td>
<td><img src="image" alt="Airplane Mode" /></td>
</tr>
<tr>
<td>WiFi</td>
<td><img src="image" alt="WiFi" /></td>
</tr>
<tr>
<td>Serial2WiFi_97_EB</td>
<td><img src="image" alt="Serial2WiFi_97_EB" /></td>
</tr>
<tr>
<td>Bluetooth</td>
<td><img src="image" alt="Bluetooth" /></td>
</tr>
<tr>
<td>Notifications</td>
<td></td>
</tr>
<tr>
<td>Control Center</td>
<td></td>
</tr>
<tr>
<td>Do Not Disturb</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td></td>
</tr>
<tr>
<td>Display &amp; Brightness</td>
<td><img src="image" alt="Display &amp; Brightness" /></td>
</tr>
<tr>
<td>Wallpaper</td>
<td><img src="image" alt="Wallpaper" /></td>
</tr>
<tr>
<td>Sounds</td>
<td><img src="image" alt="Sounds" /></td>
</tr>
<tr>
<td>Touch ID &amp; Passcode</td>
<td><img src="image" alt="Touch ID &amp; Passcode" /></td>
</tr>
<tr>
<td>Privacy</td>
<td></td>
</tr>
<tr>
<td>iCloud</td>
<td><img src="image" alt="iCloud" /></td>
</tr>
</tbody>
</table>

Known networks will be joined automatically. If no known networks are available, you will have to manually select a network.
You can now connect to the WA232E’s admin page by using a web-browser:

A free terminal emulator APP for iOS is offered from the iTunes store:

Most of the free serial terminals are compatible with the WA232E, simply search the Apple App Store for “Serial Terminal”, check what is available and experiment with the various terminals until you find one you like. Here is the QR code for the free APP:
Enter the WA232E's IP address and port number, 192.168.0.3 port 5000, and press the CONNECT button:
Now put a jumper wire between the TX and RX pins (pins 2 and 3) in the WA232E’s DB9 connector. Enter a text string in the upper ‘send’ window and press the send button:

If the connection is set up correctly, you have the jumper wire in place and the adapter is working properly then the text from the upper window will be received in the lower ‘receive’ window.
How to connect the WA232E using a wireless router

The setup looks like this:

First login to the WA232E using an access point (not the wireless router) as described earlier in this guide. Go to the “WiFi Wizard” screen, select the SSID you want to connect to and click the “Next” button:
Enter your security key:

Serial WiFi Converter

Enter WiFi Security Key

Please enter a pre-share key between 8–63 digits in length.

Pre-Share Key: 123456789

Next  Cancel
Enable DHCP or give the WA232E a static IP address and click the "Accept" button:

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area Name/SSID</td>
<td>CoronaExtra</td>
</tr>
<tr>
<td>AP Channel</td>
<td>3</td>
</tr>
<tr>
<td>Security Mode</td>
<td>WPA/WPA2 AES</td>
</tr>
<tr>
<td>DHCP Client</td>
<td>Enable</td>
</tr>
<tr>
<td>Static IP Address</td>
<td>192.168.0.3</td>
</tr>
<tr>
<td>Static Default Gateway</td>
<td>192.168.0.1</td>
</tr>
<tr>
<td>Static Subnet Mask</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>Static DNS Server</td>
<td>168.95.1.1</td>
</tr>
</tbody>
</table>
To check and verify if the WA232E has joined the network successfully you may be able to login to your wireless routers admin status page and see what IP address has been assigned to the WA232E:

![Network Configuration](image)

**IP Configuration**
- **IP type**: DHCP server
- **IP address**: 192.168.1.1
- **IP Netmask**: 255.255.255.0
- **Gateway**: 192.168.1.1
- **WINS**: 0.0.0.0
- **Primary DNS**: 192.168.1.1
- **Secondary DNS**: 192.168.1.1
- **IP range**: 192.168.1.100 to 192.168.1.254
- **Lease time**: 43200
- **Max lease time**: 43200

**Dynamic Leases**
- **IP Address**: 192.168.1.104
  - **MAC Address**: 00:0E:CB:40:03:FE
  - **Hostname**: DML-PC
  - **Expires**: 2017/02/11 07:12
  - **Status**: Static
- **IP Address**: 192.168.1.131
  - **MAC Address**: C8:60:00:BC:60:36
  - **Hostname**: DML-PC
  - **Expires**: 2017/02/11 04:09
  - **Status**: Static
- **IP Address**: 192.168.1.179
  - **MAC Address**: A4:34:D9:A1:92:8A
  - **Hostname**: DESKTOP-ILSQPOE
  - **Expires**: 2017/02/11 06:59
  - **Status**: Static
- **IP Address**: 192.168.1.123
  - **MAC Address**: 7B:7E:61:66:2C:EF
  - **Hostname**: iPad
  - **Expires**: 2017/02/11 06:53
  - **Status**: Static
- **IP Address**: 192.168.1.143
  - **MAC Address**: 00:04:30:5F:DC:01
  - **Hostname**: NETGEM-5fdcd1
  - **Expires**: 2017/02/11 06:48
  - **Status**: Static
- **IP Address**: 192.168.1.100
  - **MAC Address**: 00:03:CD:64:00:00
  - **Hostname**: 0003CD040000
  - **Expires**: 2017/02/11 04:04
  - **Status**: Static

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If logging into your wireless router is not an option then you can find the WA232E’s IP address with an IP Scanner such as “Advanced IP Scanner”, http://www.advanced-ip-scanner.com/
You can now login to the WA232E using the new IP address:
## System Settings

- **Network Mode:** Stallion
- **AP Channel:** 11
- **Service Area Name/SSID:** CoronaExtra
- **Security Mode:** WPA/WPA2 Auto

### WEP Encryption Key Settings

- **Key Length:** 64 bits
- **Key Index Select:** Key Index 0
- **Key Index 0:** 12345
- **Key Index 1:** 67890
- **Key Index 2:** 54321
- **Key Index 3:** 09876

*Please enter 5 ASCII codes or 10 digit hex for 64-bit key length.*

### AES/TKIP Encryption Key Settings

- **AES/TKIP Passphrase:** 123456789

*Please enter a string between 8-63 digits in length.*
Troubleshooting / Known issues

Dropped connections or connection problems.

Using a serial WiFi adapter on a high traffic network with many WiFi and/or Bluetooth connections may sometimes be a challenge since all WiFi and Bluetooth devices share the same 2.4Ghz frequency. Sometimes this “noisy / busy” environment can cause problems connecting to the WA232E or it can cause dropped connections, so here are a few things you can try to improve the situation:

1. Try changing the wireless channel.

2. Try changing the wireless data rate. Lowering the data rate may help improve time-out issues.

3. If possible try and scan the 2.4Ghz spectrum. This can for example be done by using a 3rd party software such as:
   - inSSID:
     http://www.metageek.net/products/inssider/
   - WiFi Stumbler:
     http://meraki.cisco.com/products/wireless/wifi-stumbler
   - For Android: WiFi Analyzer APP

   Analyze the network and use the channel with the least number of other wireless devices.

1. Check the number of DHCP clients of your router if you use a wireless router. If the number of available IP addresses is less than the number of WA232E’s then they will disconnect randomly.

2. Make sure the WA232E’s power supply is sufficient. We recommend 5VDC 1000mA USB power adapter, powered from a 120VAC-5VDC wall adapter.

3. Bandwidth of AP: If you connect using an external Access Point, please set 20 MHz bandwidth. 40 MHz may not work.
Question:
Can I be connected to the Internet while also being connected to the WA232E? (when using a Windows laptop with a built-in WiFi card).

Answer:
Windows does not have a feature to have two wireless networks connected at the same time using only one network card. So you would need to connect another WiFi card (for example a USB WiFi dongle) to your PC to be able to have two network connections at the same time. This works in most cases however Windows does have bugs in this regard, in some cases Windows will crash when connecting two wireless cards to the same PC. Linux does not have this 'limitation'.